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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,105	09/18/2002	Chien-Shou Chen	VIAP0041USA	6173
27765	7590	01/12/2005	EXAMINER	
(NAIPC) NORTH AMERICA INTERNATIONAL PATENT OFFICE			AGUSTIN, PETER VINCENT	
P.O. BOX 506			ART UNIT	
MERRIFIELD, VA 22116			PAPER NUMBER	

2652

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/065,105

Applicant(s)

CHEN, CHIEN-SHOU

Examiner

Peter Vincent Agustin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 November 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to because on Figure 3, step 118, "Performe" should be --Perform--. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities:

Page 1, line 11 of paragraph 4: "running power" should be --running optimum power--.

Page 13, last line: "disc;" should be --disc.--.

Claim 8, line 2: "fist" should be --first--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyata (US 6,052,347) in view of the applicant's admitted prior art.

In regard to claim 1, Miyata discloses a writing power control method (see title) of a compact disc drive for controlling a writing power used for writing data onto a compact disc; the writing power control method comprising: (a) dividing said compact disc into a plurality of writing zones (ZONE 1, ZONE 2 & ZONE 3 on Figure 5) according to a plurality of reference linear velocities (see vertical axis of Figure 4), each of said plurality of reference linear velocities having a corresponding reference writing power (see vertical axis of Figure 5); (b) obtaining a writing linear velocity (any LINEAR VELOCITY value on ZONE 1 of Figure 4) of desired data; (c) determining a target writing zone (ZONE 1 on Figure 6) within said plurality of writing zones of said compact disc and two reference linear velocities (Figure 4: V_r & $(R_2/R_1)V_r$) of said target writing zone according to said writing linear velocity of desired data; and (d) determining an optimum writing power (Figure 7: P_{m1} & P_{m2}) of said desired data according to the corresponding reference writing powers of said two reference linear velocities. However, in

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regard to claim 1, Miyata does not explicitly disclose: that each of said plurality of reference linear velocities have a corresponding reference reflected pulse level; determining a target reflected pulse level of said desired data according to the corresponding reference reflected pulse levels; and performing a running optimum power control (ROPC) procedure with said optimum writing power and said target reflected pulse level of said desired data for writing said desired data onto said compact disc.

The applicant's admitted prior art discloses determining a target reflected pulse level of desired data according to a corresponding reference reflected pulse level and performing a running optimum power control (ROPC) procedure with an optimum writing power and said target reflected pulse level of said desired data for writing said desired data onto an compact disc (see paragraph 7). It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to have added the steps of determining a target reflected pulse level and performing a running optimum power control procedure to the writing power control method of Miyata as suggested by the applicant's admitted prior art, the motivation being to ensure the accuracy of the etching on the compact disc. It should be noted that the claimed plurality of reference linear velocities having a corresponding reference reflected pulse level would be the inherent result of the obvious combination above.

In regard to claim 2, Miyata discloses that said compact disc comprises a power calibration area (Figure 6: OPC AREA) for performing a power calibration, said plurality of reference linear velocities comprising a first reference linear velocity (Figure 4: V_r) and a second reference linear velocity (Figure 4: $(R_2/R_1)V_r$), the reference writing powers comprising a first reference writing power (Figure 5: P_0) with respect to said first reference linear velocity and a

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second reference writing power (Figure 5: $(R2/R1)P0$) with respect to said second reference linear velocity, and the writing power control method further comprises: controlling a spin velocity of said compact disc for making a linear velocity of said power calibration area equal to said first reference linear velocity so as to determine said first reference writing power by performing said power calibration at said power calibration area; controlling said spin velocity of said compact disc for making said linear velocity of said power calibration area equal to said second reference linear velocity so as to determine said second reference writing power by performing said power calibration at said power calibration area; determining other reference linear velocities besides said first reference linear velocity and said second reference linear velocity according to said first reference linear velocity and said second reference linear velocity (Figure 4: $(R3/R2)Vr$ & $(R4/R3)Vr$); and determining other reference writing powers besides said first reference writing power and said second reference writing power according to said first reference writing power and said second reference writing power (Figure 5: $(R3/R2)P0$ & $(R4/R3)P0$).

In regard to claim 3, Miyata discloses performing a writing test at said power calibration area with each reference linear velocity and each corresponding reference writing power (abstract, lines 5-8). However, in regard to claim 3, Miyata does not explicitly disclose reading a plurality of reflected pulses thereof for determining a plurality of said reference reflected pulse levels corresponding to the reference linear velocities.

The applicant's admitted prior art discloses reading reflected pulses for determining a reference reflected pulse level (see paragraph 7). It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to have added the step of reading a

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plurality of reflected pulses for determining a plurality of reference reflected pulse levels to the writing power control method of Miyata as suggested by the applicant's admitted prior art, the motivation being to ensure the accuracy of the etching on the compact disc. It should be noted that the claimed plurality of said reference reflected pulse levels corresponding to the reference linear velocities would be the inherent result of the obvious combination above.

In regard to claim 4, Miyata discloses determining said optimum writing power of said desired data according to said writing linear velocity of said desired data (abstract, lines 5-15), said two reference linear velocities (Figure 4: V_r & $(R_2/R_1)V_r$) of said target writing zone, the corresponding reference writing powers (Figure 5: P_0 & $(R_2/R_1)P_0$) of said two reference linear velocities. However, in regard to claim 4, Miyata does not explicitly disclose determining said target reflected pulse level of said desired data according to said writing linear velocity of said desired data, said two reference linear velocities of said target writing zone, the corresponding reference reflected pulse levels of said two reference linear velocities. It should be noted, however, that the claim 4 limitation not explicitly disclosed by Miyata would be the inherent result of the obvious combination above.

In regard to claims 5 & 6, these claims have limitations that are similar to those of claims 1-4; thus, they are rejected using the same rationale as applied against claims 1-4 above.

In regard to claims 7, 8 & 10, these claims have limitations that are similar to those of claims 1-4; thus, they are rejected using the same rationale as applied against claims 1-4 above. Furthermore, in regard to claim 7, Miyata discloses (a) calculating a plurality of reference linear velocities (shown in Figure 4) based on a constant angular velocity (Figure 3, vertical axis) at different radii (Figure 3, horizontal axis) of said compact disc. Furthermore, in regard to claim 8,

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Miyata discloses the claimed “distributing manner” of said plurality of reference linear velocities (Figure 4).

In regard to claim 9, Miyata does not explicitly disclose determining other reference reflected pulse levels with each of said other reference writing powers and the corresponding reference linear velocity. It should be noted, however, that this limitation would be the inherent result of the obvious combination above.

Citation of Relevant Prior Art

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Honda (US 2002/0003760) and Imamura et al. (US 2002/0057635) are pertinent to applicant's disclosure of optimum laser power calibration in multiple areas of the disc.

Koike (US 5,309,419) discloses a magneto-optical disk recording apparatus with light amount control based on multiple test performed on a test region at multiple disk rotational velocities.

Aoshima (US 5,663,941) discloses an optical disk recording device with laser power control capable of recording at various recording speeds.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Vincent Agustin whose telephone number is 703-305-8980.


The examiner can normally be reached on Monday-Friday 9:30-5:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Thi Nguyen can be reached on 703-305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Peter Vincent Agustin
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1/27/05